Ontario

Ontario Ministry of Agriculture and Food

2002 SUPPLEMENT

Production Recommendations for Ginseng

Publication 610S

This supplement contains changes/additions/deletions to Publication 610, *Production Recommendations for Ginseng*, released in March 2001. For complete information, refer to the original publication and include these changes. The OMAF Web site has been changed to *www.gov.on.ca/omaf* to reflect the recent change in the ministry name.

REMOVE Table 7-5 on page 63 and REPLACE with the following table

TABLE 7– 5.

Disease Control Recommendations for Ginseng in Ontario

Target Pest	Product	Product Rate	Active Chemical	Comments
Rhizoctonia	QUADRIS Flowable Fungicide	**QUADRIS is available on a temporary, time-limited, emergency-use basis only. Check the approval status before applying. See "Comments" for water volume.** **Newly seeded gardens:** 1st application – After Sept. 30, apply 1.12 L of QUADRIS Flowable/ha, post seeding. 2nd application – Before May 1st apply 1.12 L of product/ha in the spring (following seeding) pre-emergence. **Seedling gardens (gardens 1 year old in the fall):** Make only 1 application of 1.12 L/ha in the fall after Sept. 30 when the plants have senesced (died back).	Azoxystrsobin	Apply using nozzle tips and in sufficient water volume for thorough coverage. For best control of Rhizoctonia (*Rhizoctonia solani*) on ginseng, apply QUADRIS Flowable Fungicide in 4,000 L of water/ha (360 gallons water/ac). Application can be made over the straw mulch. Do not apply within 24 months of harvest. Do not apply QUADRIS more than twice in the life of a garden. **CAUTION:** QUADRIS Flowable Fungicide can be extremely toxic to certain varieties of apples and crabapples. Do not apply where there is a possibility of spray drift reaching apple or crabapple trees. Do not use sprayers used to apply QUADRIS Flowable Fungicide to spray apples or crabapples.
phytophthora root rot[1]	Ridomil 2G	31.25 kg/ha	Metalaxyl	Make the first application pre-emergent to the ginseng. Repeat twice at 4–6 week intervals depending on weather. Do not apply within 9 days of harvest. Do not apply more than 3 times in 1 season. Refer to the section *Fungicide Resistance* on pg. 44.
	Aliette WDG	5.5 kg/ha in a minimum of 200 L/ha water	fosetyl-al	Make the first application between the first 2 Ridomil applications. Repeat up to 3 times through the season depending on weather. Make the final application prior to senescence when there is 50% green in the foliage. Do not apply within 30 days of harvest. Do not apply Aliette more than 5 times in 1 season. Refer to the section *Fungicide Resistance*, pg. 44.

[1] Refer to the section *Phytophthora Root Rot and Blight of Ginseng* on pg. 51 for an integrated *Phytophthora* control program.

TABLE 7– 5.

Disease Control Recommendations for Ginseng in Ontario

Target Pest	Product	Product Rate	Active Chemical	Comments
phytophthora leaf blight	Aliette WDG	5.5 kg/ha in a minimum of 200 L/ha water	fosetyl-al	Do not apply Aliette more than 5 times in 1 season. Do not apply within 30 days of harvest.
alternaria leaf blight	Dithane M-45	4.4 kg/ha in 2,000 L/ha water	Mancozeb	Apply when disease first appears. Do not apply within 30 days of harvest. Alternate with Bravo and Rovral.
	Dithane DG	4.4 kg/ha in 2,000 L/ha water	Mancozeb	Apply when disease first appears. Do not apply within 30 days of harvest. Alternate with Bravo and Rovral.
	Pencozeb 75 DF	4.4 kg/ha in 2,000 L/ha water	Mancozeb	Apply when disease first appears. Do not apply within 30 days of harvest. Do not feed ginseng foliage to livestock.
	Pencozeb 80 WP	4.4 kg/ha in 2,000 L/ha water	Mancozeb	Apply when disease first appears. Do not apply within 30 days of harvest. Do not feed ginseng foliage to livestock.
	Manzate 200 DF	4.4 kg/ha in 2,000 L/ha water	Mancozeb	Apply when disease first appears and follow with five subsequent sprays at 2-week intervals as part of a regular spray program. Do not apply within 30 days of harvest. Do not feed treated ginseng (roots or foliage) to livestock.
	Rovral	1.1 kg/ha	Ipridione	Do not apply within 30 days of harvest. Do not apply more than 3 times throughout the season. Alternate with Bravo and Dithane.
Alternaria leaf spot	Bravo 500F	2.44.8 L/ha	Chlorothalonil	Do not apply within 14 days of harvest. Do not apply more than 6 times throughout the season. Alternate with Dithane and Rovral.
Botrytis	Bravo 500F	2.44.8 L/ha	Chlorothalonil	Do not apply within 14 days of harvest. Do not apply more than 6 times throughout the season.

REPLACE Appendix E, page 69, with the following table

Appendix E. Accredited Soil-Testing Laboratories in Ontario

The following labs are accredited to perform soil tests for pH, buffer pH, P, K, Mg and Nitrate-N on Ontario soils.

Laboratory Name	Address	Telephone/Fax/E-mail	Contact
A & L Canada Laboratories East. Inc. Web site: www.al-labs-can.com	2136 Jetstream Rd. LONDON, ON N5V 3P5	Tel: (519) 457-2575 Fax: (519) 457-2664 E-mail: aginfo@al-labs-can.com	Mr. Greg Patterson Mr. Ian McLachlin
Accutest Laboratories Web site: www.accutestlabs.com	146 Colonnade Rd. Unit #8 NEPEAN, ON K2E 7Y1	Tel: (613) 727-5692 Fax: (613) 727-5222 E-mail: phaulena@accutestlabs.com	Mrs. Lorna Wilson Mr. Peter Haulena
Agri-Food Laboratories Web site: www.agtest.com	503 Imperial Rd. Unit #1 GUELPH, ON N1H 6T9	Tel: (519) 837-1600 1-800-265-7175 Fax: (519) 837-1242 E-mail: lab@agtest.com	Mr. Dale Cowan Ms. Nora Wilson
Soil and Nutrient Laboratory	University of Guelph P.O. Box 3650 95 Stone Rd. W. GUELPH, ON N1H 2W1	Tel: (519) 767-6226 Fax: (519) 767-6240 E-mail: info@lsd.uoguelph.ca	Ms. Virginia Kerslake
Stratford Agri Analysis (A Daco Laboratories Ltd.)	1131 Erie St. Box 760 STRATFORD, ON N5A 6W1	Tel: (519) 273-4411 1-800-323-9089 Fax: (519) 273-4411 E-mail: info@stratfordagri.com	Mr. Dale Peters Mr. Gary Roberts Mr. Keith Lemp Dr. Jim Brimner

There is no official accreditation in Ontario for tissue analysis, but all the accredited soil-testing labs are monitored for proficiency on tissue analyses.

REPLACE Appendix F, page 70, with the following table

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Appendix F.
Ontario Ministry of Environment and Energy Pesticide Control Offices

REGION County	PESTICIDES OFFICER Address	Telephone
Central Region Toronto, Halton, Peel, York, Durham	**Charles Zubovits** **Cathy Wright** 5775 Yonge St, 8th Floor Toronto, Ontario M2M 4J1	(416) 326-3671 (416) 326-3477 Toll Free 1-800-810-8048 Fax (416) 325-6347
West-Central Region Haldimand-Norfolk, Niagara, Hamilton-Wentworth, Dufferin, Wellington, Waterloo, Brant	**Charlie Roland** Ontario Government Building 119 King St. West, 12th Floor Hamilton, Ontario L8P 4Y7	(905) 521-7658 Toll Free 1-800-668-4557 Fax (905) 521-7820
Eastern Region Frontenac, Hastings, Lennox & Addington, Prince Edward, Leeds & Grenville, Prescott & Russell, Stormont/Dundas & Glengarry , Haliburton, Peterborough, Victoria, Northumberland, Renfrew, Ottawa-Carleton, Lanark, District of Nipissing (Twsps of Airy, Murchison, Dickens, Lyell and Sabine)	**Roberto Sacilotto** **Laurel Grills** 133 Dalton Avenue P.O. Box 820 Kingston, Ontario K7L 4X6	(613) 549-4000 ext. 2684 (613) 549-4000 ext. 2702 Fax (613) 548-6908 Toll Free 1-800-267-0974
Southwestern Region Elgin, Middlesex, Oxford, Essex, Kent, Lambton, Bruce, Grey, Huron, Perth,Simcoe	**Gary Roberts** 695 Exeter Road, 2nd Floor London, Ontario N6E 1L3	(519) 873-5047 Toll Free 1-800-265-7672 Fax (519) 873-5020
Northern Region Manitoulin, Nipissing, Parry Sound, Sudbury, Algoma East, Cochrane East, Muskoka	**John Negusanti** 199 Larch Street, Ste 1101 Sudbury, Ontario P3E 5P9	(705) 564-3249 Toll Free 1-800-890-8516 Fax (705)564-4180
Kenora, Rainy River, Thunder Bay, Algoma West, Cochrane West, Timmins	**Don Mitchell** 435 James St. S., Suite 331 Thunder Bay, Ontario P7E 6S7	(807) 475-1712 Fax (807) 475-1745
Standards Development Branch	**Pesticides Section** 40 St. Clair Avenue West, 7th Floor Toronto, Ontario M4V 1M2	(416) 327-5519 Fax (416) 327-2936
Approvals Branch	**Pesticides Licensing** 2 St. Clair Avenue West, 12A Floor Toronto, Ontario M4V 1L5	(416) 314-8001 Toll Free 1-800-461-6290 Fax (416) 314-8452

Each year the appropriate working group of the Ontario Pest Management Research and Services Committee reviews the pesticides listed in this publication. To the best knowledge of the committee, at the time of printing, all of these pesticides were:

- federally registered
- reviewed by the Ontario Pesticides Advisory Committee (OPAC)
- classified by the Ministry of Environment and Energy as of July 2002.

The information in this publication is general information only. By printing this publication, the Ministry of Agriculture and Food does not offer any warranty or guarantee, nor does it assume any liability for any crop loss, animal loss, health, safety or environmental hazard caused by the use of a pesticide mentioned in this publication.

The pesticide product label is a legal document. It is against the law to use the product in any other way. You must also use all pesticides in accordance with the *Pesticides Act* and Regulation 914, administered by the Ontario Ministry of Environment and Energy.

In this publication, most recommendations list several pesticides that can be used for each pest discussed. In general the least hazardous materials and those pesticides that pesticide applicators have used satisfactorily for years are listed first. More toxic pesticides and/or newer ones with less practical grower experience follow.

This publication lists a number of brand names of pesticides. This is for your convenience only. It is neither an endorsement of the product nor a suggestion that similar products are ineffective.

Consult each product label for specific information such as compatibility with other materials and the effect of environmental conditions. Weather and other factors influence the effectiveness of pesticides and the likelihood of crop injury.

Health Canada has established maximum residue limits (MRLs) for pesticides. Processors or retailers may demand more restrictive limits. Growers should seek advice of their intended market as to which restrictions or limitations apply. Keep accurate and up-to-date records on pesticide use in each crop.

Federal Registration of Pesticide Products

The Pest Management Regulatory Agency (PMRA) of Health Canada grants registration following an evaluation of scientific data to ensure that the product has merit and value; and the human health and environmental risks associated with its proposed use are acceptable.

1. Full Registration

Pesticide registrations are normally granted for a period of five years, subject to renewal.

2. Temporary Registration

Temporary registration may be granted for a period not to exceed one year, where the registrant agrees to produce additional scientific or technical information, or the pesticide is used for emergency control of a serious pest outbreak.

Supplemental Labels

You MUST obtain a supplemental label and follow all the label directions when PMRA approves new uses for a registered pesticide that do not appear on the current label.

Examples of when you must use a supplemental label include:

Temporary Registrations for Emergency Use

Minor Use Label Expansion (new label statements for crops that do not already appear on that product label)

You can obtain a copy of a supplemental label from the pesticide manufacturer or pesticide vendor, the grower association that sponsored the emergency registration or minor use, from OMAF or PMRA's Pest Management Information Service.

For more information on the federal registration status check the PMRA Web site at *www.hc-sc.gc.ca/pmra-arla* or call **1-800-267-6315**.

Regulation of Pesticides in Ontario

Classification of Pesticides into "Schedules"

The Ministry of Environment and Energy classifies all pesticide products into one of six **schedules,** based on the potential hazards that product may have for human health and the environment. For up-to-date information on the regulatory status of any pesticide check the Ontario Pesticides Advisory Committee Web site at *www.opac.gov.on.ca* or call (416) 314-9230/ fax (416) 314-9237.

Licensing and Certification Requirements for Pesticide Users

You must be a certified grower or licensed exterminator to buy and use Schedule 1, 2 and 5 pesticides.

Requirements for Growers and their Assistants

Growers must be certified through the **Grower Pesticide Safety Course** to buy and use Schedules 1, 2 or 5 pesticides on land they farm. There must be at least one certified grower for each farm operation.

All agricultural assistants must also receive formal pesticide safety training, recognized by the Ministry of Environment and Energy, before they can use Schedule 2 or 5 pesticides under the supervision of a certified grower. This applies to all assistants — including family members, farm employees and seasonal workers.

For more information about training for growers and agricultural assistants check the Ontario Pesticide Education Program Web site at *www.ridgetownc.uoguelph.ca/opep/* or call **1-800-652-8573.**

Requirements for Commercial Applicators and their Assistants

If you plan to apply pesticides as a business, you must be a licensed exterminator. **This includes farmers who custom apply pesticides for other farmers and charge a fee for this service.** You must complete a home study course and certification exam, and send proof of certification to the Ministry of Environment and Energy to obtain your license.

Unlicensed assistants must be Technicians before they may handle Schedule 2 (with restrictions), 3, 4 and 6 products under indirect supervision of a licensed exterminator. Technicians may not handle Schedule 1 and 5 products. For more information about exterminators and technicians check the Ontario Pesticide Training and Certification Web site at *www.ridgetownc.uoguelph.ca/optc* or call 1-888-620-9999.

Cette publication est aussi disponible en français.

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